APPENDIX A - SITE-SPECIFIC DATA QUALITY OBJECTIVES
Data Quality Objective 1: Gamma Radiation

STEP 1. STATE THE PROBLEM	
Homes and related residential structures may have been constructed with or on radioactive uranium mine/mill tailings/waste, and surrounding surface soils may be contaminated with radioactive uranium mine/mill waste. The EPA Region 6 PRB will determine whether the radiological contamination poses an actual or potential imminent and substantial threat to human health and/or the environment.	
STEP 2. IDENTIFY THE DECISION	
1. Is the Total Effective Dose Equivalent (TEDE) greater than 15 mRem/yr in the residence/related structure?	
IDENTIFY THE ALTERNATIVE ACTIONS THAT MAY BE TAKEN BASED ON THE DECISIONS.	• If the TEDE is greater than 15 mRem/yr inside the residence, the residents will be relocated and a removal action will be implemented. If the TEDE exceedence is in a related structure only, relocation will be evaluated on a case-by-case basis prior to implementation of the removal action. • If the yard or compound is contaminated above the DCGL, a removal action will be implemented. • If the TEDE is less than 15 mrem/yr but some small areas of elevated radioactivity are present, a removal action may be conducted to reduce risk to the residents
STEP 3. IDENTIFY INPUTS TO THE DECISION	
IDENTIFY THE INFORMATIONAL INPUTS NEEDED TO RESOLVE A DECISION.	• TEDE (equivalent dose) inside residence. • Elevated radiological soil contamination in the yard.
IDENTIFY THE SOURCES FOR EACH INFORMATIONAL INPUT AND LIST THE INPUTS THAT ARE OBTAINED THROUGH ENVIRONMENTAL MEASUREMENTS.	• TEDE (equivalent dose) inside residence calculated from gamma exposure, air and water samples, and radon daughters. • Gamma survey/soil sampling in the yard.
BASIS FOR THE CONTAMINANT SPECIFIC ACTION LEVELS.	• The TEDE of 15 mRem/yr is from an increased cancer risk as stated in OSWER 9200-4-18.
IDENTIFY POTENTIAL SAMPLING TECHNIQUES AND APPROPRIATE ANALYTICAL METHODS.	• TEDE will be calculated using the static dose rate inside the residence and by the activity measured with sodium iodide detectors and pressurized ion chambers. Additional information will be obtained from soil samples and wipe samples.
STEP 4. DEFINE THE BOUNDARIES OF THE STUDY	
DEFINE THE DOMAIN OR GEOGRAPHIC AREA WITHIN WHICH ALL DECISIONS MUST APPLY.	Houses and other related residential structures near abandoned Uranium mines and mills in the Ambrosia Lake, and Laguna subdistricts.
SPECIFY THE CHARACTERISTICS THAT DEFINE THE POPULATION OF INTEREST.	• TEDE calculated from inside of residence/related structure and the surrounding yard.

DETERMINE WHEN TO COLLECT DATA.	Data will be collected after target residences and related structures have been identified and access has been obtained. Data will apply for each individual residence and related structure tested.
IDENTIFY PRACTICAL CONSTRAINTS ON DATA COLLECTION.	• Access not attainable. • No single instrument can provide qualitative, quantitative, and exposure data for all types of radiation. • The relationship between quantitative and exposure data must be established. • Obstacles in the yards or structures may prevent a thorough radiation survey.
STEP 5. DEVELOP A DECISION RULE	
SPECIFY THE PARAMETERS THAT CHARACTERIZE THE POPULATION OF INTEREST.	The measured readings and samples at each location will be compared to the site-specific action levels.
SPECIFY THE ACTION LEVELS FOR THE DECISION.	• The Action Level for TEDE is 15 mRem/yr inside the residence. • A DCGL will be calculated for each residential area or compound to determine a specific soil action level.
DEVELOP A DECISION RULE.	If the TEDE, exceeds 15 mrem/yr or if the DCGL is exceeded, the structure will be referred to the EPA OSC to determine if additional investigation or a removal action is warranted.
STEP 6. SPECIFY LIMITS ON DECISION ERRORS	
DETERMINE THE POSSIBLE RANGE OF THE PARAMETER OF INTEREST.	Activity and exposure rates can range from background concentrations to more than the DCGLs. Readings are not expected to be greater than 1mR/hr or 1,000,000 counts per minute.
DEFINE BOTH TYPES OF DECISION ERRORS AND IDENTIFY THE POTENTIAL CONSEQUENCES OF EACH.	Type I Error: Deciding that the specified area represented by the field reading or sample does not exceed the site-specific action level when, in truth, the concentration of the contaminant exceeds its site-specific action level. The consequence of this decision error is that contaminated soil or building materials will remain in place, possibly endangering human health and the environment. There may also be potential future liability associated with cleanup costs of leaving contamination in place. This decision error is more severe. Type II Error: Deciding that the specified area represented by the field reading or sample does exceed the site-specific action level when, in truth, it does not. The consequences of this decision error are that remediation of the specified area will continue and unnecessary costs will be incurred.

ESTABLISH THE TRUE STATE OF NATURE FOR EACH DECISION RULE.	The true state of nature when the soil or building materials are decided to be below the site-specific action levels when in fact, they are not below the specified assessment levels, is that the area does need remedial action. The true state of nature when the soil or building materials are decided to be above the site-specific action levels when in fact, they are not above the site specific-action level, is that the area does not need remedial action.
DEFINE THE TRUE STATE OF NATURE FOR THE MORE SEVERE DECISION ERROR AS THE BASELINE CONDITION OR THE NULL HYPOTHESIS (H_o) AND DEFINE THE TRUE STATE FOR THE LESS SEVERE DECISION ERROR AS THE ALTERNATIVE HYPOTHESIS (H_a).	H_o: The material represented by the field reading or sample of the specified area is above the site-specific action level.. H_a: The material represented by the field reading or sample of the specified area is below the site-specific action level.
ASSIGN THE TERMS "FALSE POSITIVE" AND "FALSE NEGATIVE" TO THE PROPER DECISION ERRORS.	• False Positive Error = Type I • False Negative Error = Type II
ASSIGN PROBABILITY VALUES TO POINTS ABOVE AND BELOW THE ACTION LEVEL THAT REFLECT THE ACCEPTABLE PROBABILITY FOR THE OCCURRENCES OF DECISION ERRORS.	To be assigned based on discussions with EPA OSC.
STEP 7. OPTIMIZE THE DESIGN	
REVIEW THE DQOs.	Due to insufficient historical data, determination of the standard deviation was not possible; therefore, sample size calculation using the traditional statistical formula may not be the optimal design. In order to select the optimal sampling program that satisfies the DQOs and is the most resource effective, other elements were considered.
DEVELOP GENERAL SAMPLING AND ANALYSIS DESIGN. • Screening will be conducted in the yards of each residence using 2x2 NaI detectors. • The exterior of each house will be screened with 2x2 NaI detectors. • The walls of each room will be screened with 2x2 NaI detectors. • The dose rate will be measured in each room of the structure using a Pressurized Ion Chamber. • Biased soil samples may be collected from areas in the yard with elevated gamma readings. The soil samples will be analyzed for Radium-226.	

SITE-SPECIFIC DATA QUALITY OBJECTIVES
Data Quality Objective 2: Radon

STEP 1. STATE THE PROBLEM	
Homes and related residential structures may have been constructed with or on radioactive uranium mine/mill tailings/waste, and surrounding surface soils may be contaminated with radioactive uranium mine/mill waste. The EPA Region 6 PRB will determine whether the radiological contamination poses an actual or potential imminent and substantial threat to human health and/or the environment.	
STEP 2. IDENTIFY THE DECISION	
1. Is the Radon level greater than 4 pCi/L inside the residence/related structure?	
IDENTIFY THE ALTERNATIVE ACTIONS THAT MAY BE TAKEN BASED ON THE DECISIONS.	• If the Radon levels are greater than 4 pCi/L inside the residence, the residents will be relocated and a removal action will be implemented. If the Radon exceedence is in a related structure only, relocation will be evaluated on a case-by-case basis prior to implementation of the removal action.
STEP 3. IDENTIFY INPUTS TO THE DECISION	
IDENTIFY THE INFORMATIONAL INPUTS NEEDED TO RESOLVE A DECISION.	• Radon activity inside residence.
IDENTIFY THE SOURCES FOR EACH INFORMATIONAL INPUT AND LIST THE INPUTS THAT ARE OBTAINED THROUGH ENVIRONMENTAL MEASUREMENTS.	• Radon sample collected inside residence.
BASIS FOR THE CONTAMINANT SPECIFIC ACTION LEVELS.	• Action level of 4 pCi/L for Radon activity inside residence is from current EPA policy. •
IDENTIFY POTENTIAL SAMPLING TECHNIQUES AND APPROPRIATE ANALYTICAL METHODS.	• Radon activity inside residence will be measured by collecting samples on charcoal canisters, which will be sent to a laboratory for gross alpha analysis.
STEP 4. DEFINE THE BOUNDARIES OF THE STUDY	
DEFINE THE DOMAIN OR GEOGRAPHIC AREA WITHIN WHICH ALL DECISIONS MUST APPLY.	Houses and other related residential structures near abandoned Uranium mines and mills in the Ambrosia Lake, and Laguna subdistricts.
SPECIFY THE CHARACTERISTICS THAT DEFINE THE POPULATION OF INTEREST.	• Radon activity inside residence/related structure.

DETERMINE WHEN TO COLLECT DATA.	Data will be collected after target residences and related structures have been identified and access has been obtained. Data will apply for each individual residence and related structure tested.
IDENTIFY PRACTICAL CONSTRAINTS ON DATA COLLECTION.	• Access not attainable.
STEP 5. DEVELOP A DECISION RULE	
SPECIFY THE PARAMETERS THAT CHARACTERIZE THE POPULATION OF INTEREST.	The measured readings and samples at each location will be compared to the site-specific action levels.
SPECIFY THE ACTION LEVELS FOR THE DECISION.	• The Action Level for Radon is 4 pCi/L inside the residence.
DEVELOP A DECISION RULE.	If either the Radon action level is exceeded the structure will be referred to the EPA OSC to determine if additional investigation or a removal action is warranted.
STEP 6. SPECIFY LIMITS ON DECISION ERRORS	
DETERMINE THE POSSIBLE RANGE OF THE PARAMETER OF INTEREST.	Radon concentrations can range from 0-10 pCi/L.
DEFINE BOTH TYPES OF DECISION ERRORS AND IDENTIFY THE POTENTIAL CONSEQUENCES OF EACH.	Type I Error: Deciding that the specified area represented by the field reading or sample does not exceed the site-specific action level when, in truth, the concentration of the contaminant exceeds its site-specific action level. The consequence of this decision error is that contaminated soil or building materials will remain in place, possibly endangering human health and the environment. There may also be potential future liability associated with cleanup costs of leaving contamination in place. This decision error is more severe. Type II Error: Deciding that the specified area represented by the field reading or sample does exceed the site-specific action level when, in truth, it does not. The consequences of this decision error are that remediation of the specified area will continue and unnecessary costs will be incurred.
ESTABLISH THE TRUE STATE OF NATURE FOR EACH DECISION RULE.	The true state of nature when the soil or building materials are decided to be below the site-specific action levels when in fact, they are not below the specified assessment levels, is that the area does need remedial action. The true state of nature when the soil or building materials are decided to be above the site-specific action levels when in fact, they are not above the site specific-action level, is that the area does not need remedial action.

DEFINE THE TRUE STATE OF NATURE FOR THE MORE SEVERE DECISION ERROR AS THE BASELINE CONDITION OR THE NULL HYPOTHESIS (H_o) AND DEFINE THE TRUE STATE FOR THE LESS SEVERE DECISION ERROR AS THE ALTERNATIVE HYPOTHESIS (H_a).	H_o: The material represented by the field reading or sample of the specified area is above the site-specific action level.. H_a: The material represented by the field reading or sample of the specified area is below the site-specific action level.
ASSIGN THE TERMS "FALSE POSITIVE" AND "FALSE NEGATIVE" TO THE PROPER DECISION ERRORS.	• False Positive Error = Type I • False Negative Error = Type II
ASSIGN PROBABILITY VALUES TO POINTS ABOVE AND BELOW THE ACTION LEVEL THAT REFLECT THE ACCEPTABLE PROBABILITY FOR THE OCCURRENCES OF DECISION ERRORS.	To be assigned based on discussions with EPA OSC.
STEP 7. OPTIMIZE THE DESIGN	
REVIEW THE DQOs.	Due to insufficient historical data, determination of the standard deviation was not possible; therefore, sample size calculation using the traditional statistical formula may not be the optimal design. In order to select the optimal sampling program that satisfies the DQOs and is the most resource effective, other elements were considered.
DEVELOP GENERAL SAMPLING AND ANALYSIS DESIGN. • A Radon sample will be collected from each house and/or enclosed structure. The sample will be sent to an analytical laboratory for analysis.	

SITE-SPECIFIC DATA QUALITY OBJECTIVES
Data Quality Objective 3: Alpha Radiation

STEP 1. STATE THE PROBLEM	
Homes and related residential structures may have been constructed with or on radioactive uranium mine/mill tailings/waste, and surrounding surface soils may be contaminated with radioactive uranium mine/mill waste. The EPA Region 6 PRB will determine whether the radiological contamination poses an actual or potential imminent and substantial threat to human health and/or the environment.	
STEP 2. IDENTIFY THE DECISION	
1. Is the gross alpha level on the removable contamination on the surface greater than 20 dpm/100 cm^2 inside the residence/related structure?	
IDENTIFY THE ALTERNATIVE ACTIONS THAT MAY BE TAKEN BASED ON THE DECISIONS.	• If the wipe samples indicate elevated levels of removable gross alpha contamination greater than 20 dpm/100 cm^2, a removal action may be implemented to remove loose or localized radiological contamination. Relocation of the residents will be evaluated on a case-by-case basis prior to the implementation of the removal action.
STEP 3. IDENTIFY INPUTS TO THE DECISION	
IDENTIFY THE INFORMATIONAL INPUTS NEEDED TO RESOLVE A DECISION.	• Removable gross alpha contamination inside the residence
IDENTIFY THE SOURCES FOR EACH INFORMATIONAL INPUT AND LIST THE INPUTS THAT ARE OBTAINED THROUGH ENVIRONMENTAL MEASUREMENTS.	• Wipe samples collected inside residence in areas of elevated gamma readings.
BASIS FOR THE CONTAMINANT SPECIFIC ACTION LEVELS.	• Action level of 20 dpm/100 cm^2 for gross alpha inside the residence is from NRC Regulatory Guide 1.86.
IDENTIFY POTENTIAL SAMPLING TECHNIQUES AND APPROPRIATE ANALYTICAL METHODS.	• Removable gross alpha activity will be measured by collecting wipe samples in areas in the house with elevated gamma readings. The wipe samples will be analyzed in the field or will be sent to a laboratory for gross alpha analysis.
STEP 4. DEFINE THE BOUNDARIES OF THE STUDY	
DEFINE THE DOMAIN OR GEOGRAPHIC AREA WITHIN WHICH ALL DECISIONS MUST APPLY.	Houses and other related residential structures near abandoned Uranium mines and mills in the Ambrosia Lake, and Laguna subdistricts.
SPECIFY THE CHARACTERISTICS THAT DEFINE THE POPULATION OF INTEREST.	• Removable gross alpha on the interior surface of the house.

DETERMINE WHEN TO COLLECT DATA.	Data will be collected after target residences and related structures have been identified and access has been obtained. Data will apply for each individual residence and related structure tested.
IDENTIFY PRACTICAL CONSTRAINTS ON DATA COLLECTION.	• Access not attainable.
STEP 5. DEVELOP A DECISION RULE	
SPECIFY THE PARAMETERS THAT CHARACTERIZE THE POPULATION OF INTEREST.	The measured readings and samples at each location will be compared to the site-specific action levels.
SPECIFY THE ACTION LEVELS FOR THE DECISION.	• The Action Level for a wipe sample is 20 alpha radiation disintegrations per minute per 100 square centimeters.
DEVELOP A DECISION RULE.	If the wipe sample action level is exceeded the structure will be referred to the EPA OSC to determine if additional investigation or a removal action is warranted.
STEP 6. SPECIFY LIMITS ON DECISION ERRORS	
DETERMINE THE POSSIBLE RANGE OF THE PARAMETER OF INTEREST.	Alpha activity can range from background concentrations to more than 100 disintegrations per minute per 100 cm^2.
DEFINE BOTH TYPES OF DECISION ERRORS AND IDENTIFY THE POTENTIAL CONSEQUENCES OF EACH.	Type I Error: Deciding that the specified area represented by the field reading or sample does not exceed the site-specific action level when, in truth, the concentration of the contaminant exceeds its site-specific action level. The consequence of this decision error is that contaminated soil or building materials will remain in place, possibly endangering human health and the environment. There may also be potential future liability associated with cleanup costs of leaving contamination in place. This decision error is more severe. Type II Error: Deciding that the specified area represented by the field reading or sample does exceed the site-specific action level when, in truth, it does not. The consequences of this decision error are that remediation of the specified area will continue and unnecessary costs will be incurred.
ESTABLISH THE TRUE STATE OF NATURE FOR EACH DECISION RULE.	The true state of nature when the soil or building materials are decided to be below the site-specific action levels when in fact, they are not below the specified assessment levels, is that the area does need remedial action. The true state of nature when the soil or building materials are decided to be above the site-specific action levels when in fact, they are not above the site specific-action level, is that the area does not need remedial action.

DEFINE THE TRUE STATE OF NATURE FOR THE MORE SEVERE DECISION ERROR AS THE BASELINE CONDITION OR THE NULL HYPOTHESIS (H_o) AND DEFINE THE TRUE STATE FOR THE LESS SEVERE DECISION ERROR AS THE ALTERNATIVE HYPOTHESIS (H_a).	H_o: The material represented by the field reading or sample of the specified area is above the site-specific action level.. H_a: The material represented by the field reading or sample of the specified area is below the site-specific action level.
ASSIGN THE TERMS "FALSE POSITIVE" AND "FALSE NEGATIVE" TO THE PROPER DECISION ERRORS.	• False Positive Error = Type I • False Negative Error = Type II
ASSIGN PROBABILITY VALUES TO POINTS ABOVE AND BELOW THE ACTION LEVEL THAT REFLECT THE ACCEPTABLE PROBABILITY FOR THE OCCURRENCES OF DECISION ERRORS.	To be assigned based on discussions with EPA OSC.
STEP 7. OPTIMIZE THE DESIGN	
REVIEW THE DQOs.	Due to insufficient historical data, determination of the standard deviation was not possible; therefore, sample size calculation using the traditional statistical formula may not be the optimal design. In order to select the optimal sampling program that satisfies the DQOs and is the most resource effective, other elements were considered.
DEVELOP GENERAL SAMPLING AND ANALYSIS DESIGN. • Wipe samples may be collected from areas with elevated gamma readings. The wipe samples will be analyzed for alpha contamination using a portable gross alpha tray counter or sent to an analytical laboratory for gross alpha analysis.	

SITE-SPECIFIC DATA QUALITY OBJECTIVES
Data Quality Objective 4: Total Uranium

STEP 1. STATE THE PROBLEM	
Homes and related residential structures may have been constructed with or on radioactive uranium mine/mill tailings/waste, and surrounding surface soils may be contaminated with radioactive uranium mine/mill waste. The EPA Region 6 PRB will determine whether the radiological contamination poses an actual or potential imminent and substantial threat to human health and/or the environment.	
STEP 2. IDENTIFY THE DECISION	
1. Is the surface soil in the yard or compound contaminated with uranium above the 230 mg/kg screening level?	
IDENTIFY THE ALTERNATIVE ACTIONS THAT MAY BE TAKEN BASED ON THE DECISIONS.	• If the surface soil is contaminated with uranium above the 230 mg/kg screening level, EPA will conduct further investigation into chemical toxicity at the residence.
STEP 3. IDENTIFY INPUTS TO THE DECISION	
IDENTIFY THE INFORMATIONAL INPUTS NEEDED TO RESOLVE A DECISION.	• Elevated uranium concentrations in the soil in the yard.
IDENTIFY THE SOURCES FOR EACH INFORMATIONAL INPUT AND LIST THE INPUTS THAT ARE OBTAINED THROUGH ENVIRONMENTAL MEASUREMENTS.	• Surface soil samples analyzed for uranium
BASIS FOR THE CONTAMINANT SPECIFIC ACTION LEVELS.	• Screening level of 230 mg/kg of uranium is from "Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites".
IDENTIFY POTENTIAL SAMPLING TECHNIQUES AND APPROPRIATE ANALYTICAL METHODS.	• Uranium concentration in soil will be determined by collecting composite surface soil samples. The samples will be screened with an XRF analyzer with laboratory confirmation of at least 10% of the samples.
STEP 4. DEFINE THE BOUNDARIES OF THE STUDY	
DEFINE THE DOMAIN OR GEOGRAPHIC AREA WITHIN WHICH ALL DECISIONS MUST APPLY.	Houses and other related residential structures near abandoned Uranium mines and mills in the Ambrosia Lake, and Laguna subdistricts.
SPECIFY THE CHARACTERISTICS THAT DEFINE THE POPULATION OF INTEREST.	• Uranium concentration in the soils.
DETERMINE WHEN TO COLLECT DATA.	Data will be collected after target residences and related structures have been identified and access has been obtained. Data will apply for each individual residence and related structure tested.
IDENTIFY PRACTICAL CONSTRAINTS ON DATA COLLECTION.	• Access not attainable. • Obstacles in the yards or structures may prevent collecting soil samples in some areas of the yard.

STEP 5. DEVELOP A DECISION RULE	
SPECIFY THE PARAMETERS THAT CHARACTERIZE THE POPULATION OF INTEREST.	The measured readings and samples at each location will be compared to the site-specific action levels.
SPECIFY THE ACTION LEVELS FOR THE DECISION.	• The screening level for uranium in the surface soil is 230 mg/kg.
DEVELOP A DECISION RULE.	If the uranium concentration screening level is exceeded the structure will be referred to the EPA OSC to determine if additional investigation or a removal action is warranted.
STEP 6. SPECIFY LIMITS ON DECISION ERRORS	
DETERMINE THE POSSIBLE RANGE OF THE PARAMETER OF INTEREST.	The concentration of uranium in the soil can range from 0-1,000 mg/kg.
DEFINE BOTH TYPES OF DECISION ERRORS AND IDENTIFY THE POTENTIAL CONSEQUENCES OF EACH.	Type I Error: Deciding that the specified area represented by the field reading or sample does not exceed the site-specific action level when, in truth, the concentration of the contaminant exceeds its site-specific action level. The consequence of this decision error is that contaminated soil or building materials will remain in place, possibly endangering human health and the environment. There may also be potential future liability associated with cleanup costs of leaving contamination in place. This decision error is more severe. Type II Error: Deciding that the specified area represented by the field reading or sample does exceed the site-specific action level when, in truth, it does not. The consequences of this decision error are that remediation of the specified area will continue and unnecessary costs will be incurred.
ESTABLISH THE TRUE STATE OF NATURE FOR EACH DECISION RULE.	The true state of nature when the soil or building materials are decided to be below the site-specific action levels when in fact, they are not below the specified assessment levels, is that the area does need remedial action. The true state of nature when the soil or building materials are decided to be above the site-specific action levels when in fact, they are not above the site specific-action level, is that the area does not need remedial action.
DEFINE THE TRUE STATE OF NATURE FOR THE MORE SEVERE DECISION ERROR AS THE BASELINE CONDITION OR THE NULL HYPOTHESIS (H_o) AND DEFINE THE TRUE STATE FOR THE LESS SEVERE DECISION ERROR AS THE ALTERNATIVE HYPOTHESIS (H_a).	H_o: The material represented by the field reading or sample of the specified area is above the site-specific action level.. H_a: The material represented by the field reading or sample of the specified area is below the site-specific action level.
ASSIGN THE TERMS "FALSE POSITIVE" AND "FALSE NEGATIVE" TO THE PROPER DECISION ERRORS.	• False Positive Error = Type I • False Negative Error = Type II

ASSIGN PROBABILITY VALUES TO POINTS ABOVE AND BELOW THE ACTION LEVEL THAT REFLECT THE ACCEPTABLE PROBABILITY FOR THE OCCURRENCES OF DECISION ERRORS.	To be assigned based on discussions with EPA OSC.
STEP 7. OPTIMIZE THE DESIGN	
REVIEW THE DQOs.	Due to insufficient historical data, determination of the standard deviation was not possible; therefore, sample size calculation using the traditional statistical formula may not be the optimal design. In order to select the optimal sampling program that satisfies the DQOs and is the most resource effective, other elements were considered.
DEVELOP GENERAL SAMPLING AND ANALYSIS DESIGN. • Composite surface soil samples will be collected from the yard. The samples will be screened using a field-portable XRF, with laboratory confirmation on 10% of the samples.	